UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
KIM, PAUL

ART UNIT	PAPER NUMBER
2169	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/748,399	WEISSMAN ET AL.
	Examiner	Art Unit	
	PAUL KIM	2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2010*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38 and 41-46* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38 and 41-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office action is responsive to the following communication: Request for Continued

Examination filed on 1 March 2010.

2.   Claims 1-38 and 41-46 are pending and present for examination.

Continued Examination Under 37 CFR 1.114

3.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR

1.17(e), was filed in this application after final rejection. Since this application is eligible for continued

examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the

finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's

submission filed on 1 March 2010 has been entered.

Response to Amendment

4.   Claims 1, 12, 20, 31, and 41 have been amended.

5.   No claims have been added.

6.   Claims 39-40 have been cancelled.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to a
> person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

8.   **Claims 1-11, 15-30, 34-40, and 42-46** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wical et al (U.S. Patent No. 6,101,515, hereinafter referred to as WICAL), filed on 31

May 1996, and issued on 8 August 2000, in view of Wical et al (U.S. Patent No. 6,038,560, hereinafter

referred to as WICAL '560), filed on 21 May 1997, and issued on 14 March 2000, in further view of

Borgida et al (U.S. Patent No. 5,806,060, hereinafter referred to as BORGIDA), filed on 23 April 1997,

and issued on 8 September 1998, and in further view of Wical et al (U.S. Patent No. 5,930,788,

hereinafter referred to as WICAL '788), filed on 17 July 1997, and issued on 27 July 1999.

9.   **As per independent claims 1 and 20**, WICAL, in combination with WICAL '560, BORGIDA,

and WICAL '788, discloses:

> A machine-implemented method, comprising:

>> receiving, at a computer system, from a user interacting with a user interface of a
>> data processor, {See WICAL '560, C4:L39-44, wherein this reads over "[a] user, by processing
>> documents in the content processing system described herein, may compile a knowledge base that
>> associates terms of the documents with categories of a classification system to develop contextual
>> associations for terminology"; and See WICAL, C22:L9-10, wherein this reads over "the input control
>> device(s) provide a portion of the user interface for a user of the computer system"}, a primary
>> term representing a new first concept to be created in an existing machine-
>> readable network of interrelated concepts {See WICAL, col. 4, lines 49-65, wherein this
>> reads over "the learning system may select the high level category 'business and economics'"},
>> wherein a concept comprises a normalized semantic representation that is
>> defined in the existing machine-readable network of interrelated concepts by a
>> group of synonyms;

>> receiving, from the user interacting with the user interface {See WICAL, C22:L9-10,
>> wherein this reads over "the input control device(s) provide a portion of the user interface for a user
>> of the computer system"}, a first related term and a second related term associated
>> with the primary term and representing the new first concept {See WICAL, C4:L49-
>> 65, wherein this reads over "an example input term, 'short-term'"; See WICAL, C9:L33-35, wherein
>> this reads over "the learning system receives user input that specifies, in part, terms for learning";
>> and See WICAL '560, C10:L29-32, wherein this reads over "the search and retrieval system 100
>> receives, as input, user queries, and generates, as output, search results which, depending upon the
>> mode of operation, identifies categories and documents"}, the first and the second related
>> terms being synonyms;

>> receiving, from the user interacting with the user interface, at least one relationship
>> between the new first concept and a second concept {See WICAL, col. 5, lines 16-19,
>> wherein this reads over "[t]he learning system classifies the term 'short-term' in the 'economics'
>> category"};

>> receiving, from the user interacting with the user interface, a relationship type
>> characterizing the at least one relationship {See WICAL, Figure 3; col. 3, lines 2-29,
>> wherein this reads over "[t]he categories are arranged in a hierarchical structure that includes a
>> plurality of levels"; and col. 4, lines 43-45, wherein this reads over "the parent category . . . includes
>> the child categories"};

receiving, from the user interacting with the user interface, a strength value characterizing the relationship {See WICAL, col. 10, lines 34-40, wherein this reads over "reflects the strength of the classification of the term for the category"}; and

representing the association between the primary term and the at least one related term {See BORGIDA, C7:L1-13, wherein this reads over "a set of binary relation definitions"; and C7:L14-40}, the at least one relationship and the relationship type to the user on the user interface {See WICAL '560, Figure 3; and C10:L36-62, wherein this reads over "[t]he example presentation shown in FIG. 3 provides a global view of the response to the users query"};

receiving a user request, from the user interacting with the user interface, to add the new first concept to the machine-readable network of interrelated concepts {See WICAL '560, C11:L66-C12:L17, wherein this reads over "the linguist develops cross reference associations when two terms/ categories have a strong linguistic, semantic, or usage relationship"}; and

in response to the user request, a semantic engine creating the new first concept in the existing machine-readable network {See WICAL, col. 4, lines 25-28, wherein this reads over "[i]n addition to identifying the proper high level category to learn a term, the learning system determines the proper level of the hierarchy under the high level category to classify the term"} of interrelated concepts to expand the existing network of interrelated concepts by adding the new first concept to the existing network of interrelated concepts, wherein creating the new first concept comprises adding the primary term, the first and the second related terms, the relationship between the first concept and the second concept, the relationship type {See BORGIDA, C7:L14-59 and C9:L44-66}, and the strength value {See WICAL '788, Table 1; and C9:L14-39} to the existing machine-readable network of interrelated concepts to represent the new first concept and the relationship between the first concept and the second concept, wherein the first and the second related terms define the first new concept as members of the group of synonyms that defines the first new concept.

While WICAL may fail to expressly disclose the use of a user interface to represent term relationships, WICAL '560 discloses the use of an interface to provide a global view of relationships between concepts. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by WICAL with the invention as disclosed by WICAL '560. While WICAL may fail to expressly disclose the method step of adding a primary term, the related term, the relationship between the first concept and the second concept, and the relationship type to a network, BORGIDA discloses an invention wherein new concepts are integrated into a knowledge-based management system of concepts and relations. Lastly, while WICAL may fail to expressly disclose strength values for a concept, WICAL '788 discloses an invention wherein concept terms are associated with weights.

   One of ordinary skill in the art would have been motivated to do these modifications so that

concepts may be added to the network in response to a user request.

10.   **As per dependent claims 2 and 21**, WICAL, in combination with WICAL '560, BORGIDA, and

WICAL '788, discloses:

   The method of claim 1, wherein representing the association comprises:

      displaying a concept view {See WICAL, col. 17, lines 26-28,wherein this reads over "the learning
         system includes a user interface that allows the user to select a number of terms for which the user
         desires to manually verify"}.

11.   **As per dependent claims 3 and 22**, WICAL, in combination with WICAL '560, BORGIDA, and

WICAL '788, discloses:

   The method of claim 1, further comprising receiving information characterizes a part of
      speech of the new first concept {See WICAL, col. 19, lines 38-42, wherein this reads over "the
      lexicon defines whether a particular word is a noun, a verb, an adjective, etc."}.

12.   **As per dependent claims 4, 15, 23, and 34**, WICAL, in combination with WICAL '560,

BORGIDA, and WICAL '788, discloses:

   The method of claim 1, wherein the relationship comprises a hierarchical relationship or a
      lateral bond that indicates a proximity of the new first concept to the second concept
      in semantic space {See WICAL, Figures 1b, 3, and 7; and col. 9, lines 38-52, wherein this reads over
      "the semantic/lexical relationship between categories, is first measured in an up/down direction, and then,
      if applicable, in a left/right direction"}.

13.   **As per dependent claims 5, 16, 24, 35, and 42**, it would be inherent for the relationship

between the terms and categories to take the form of one of the following: kind of, has kind, part of, has

part, member of, has member, substance of, has substance, product of, and has product. That is, in

order for a term to be considered within a category, the relationship will minimally require that the term

at least be either a "member of" the category.

14.   **As per dependent claims 6, 17, 25, and 36**, WICAL, in combination with WICAL '560,

BORGIDA, and WICAL '788, discloses:

   The method of claim 1, further comprising receiving information characterizing a
      frequency of the primary term {See WICAL, col. 11, lines 6-9, wherein this reads over "[t]he
      learning system utilizes the cumulative total number of documents classified into a particular category for
      a term"}.

15.   **As per dependent claims 7, 18, 26, and 37**, WICAL, in combination with WICAL '560,

BORGIDA, and WICAL '788, discloses:

> The method of claim 1, further comprising receiving information characterizing a
> likelihood that the primary term and the related terms imply the new first concept
> {See WICAL, col. 11, lines 52-54, wherein this reads over "a cumulative classification strength is assigned
> to each branch of categorization schema"; and lines 56-57, wherein this reads over "the learning system
> also includes determining whether the term is worth learning"}.

16.   **As per dependent claims 8, 19, 27 and 38**, WICAL, in combination with WICAL '560,

BORGIDA, and WICAL '788, discloses:

> The method of claim 1, further comprising receiving information characterizing a breadth
> of the new first concept {See WICAL, col. 7, lines 35-37, wherein this reads over "[t]he knowledge
> catalog, used to classify terms for learning, provides a unique infrastructure to accurately represent
> categories that define knowledge" and "a set of static ontologies"}.

17.   **As per dependent claims 9 and 28**, WICAL, in combination with WICAL '560, discloses:

> The method of claim 1, further comprising receiving information indicating that the new
> first concept is offensive {See WICAL, col. 11, lines 62-63, wherein this reads over "[t]he learning
> system analyzes the contextual data to determine whether the term is too ambiguous to learn"}.

18.   **As per dependent claims 10 and 29**, WICAL, in combination with WICAL '560, BORGIDA, and

WICAL '788,discloses:

> The method of claim 1, further comprising receiving user data {See WICAL, col. 17, lines 9-10,
> wherein this reads over "a user may therefore re-categorize one or more phrases"} further describing
> the new first concept.

19.   **As per dependent claims 11 and 30**, WICAL, in combination with WICAL '560, BORGIDA, and

WICAL '788,discloses:

> The method of claim 1, further comprising receiving context information {See WICAL, col. 2,
> lines 3-5, wherein this reads over "[d]uring an accumulation phase, the learning system accumulates
> contextual data from the set of documents for the term"}.

20.   **As per dependent claims 39 and 40,** it would have been obvious to one of ordinary skill in

the art that related term of a primary term in a network of interrelated concepts may be an acronym or

synonym.

21.   **Claims 12-14, 31-33, 15-30, 34-38, and 42** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wical et al (U.S. Patent No. 6,101,515, hereinafter referred to as WICAL), in view of

Wical et al (U.S. Patent No. 6,038,560, hereinafter referred to as WICAL '560), and in further view of

Borgida et al (U.S. Patent No. 5,806,060, hereinafter referred to as BORGIDA).

22.   **As per independent claims 12 and 31**, WICAL, in combination with WICAL '560 and

BORGIDA, discloses:

> A machine-implemented method, comprising:

>> receiving, from a user <u>interacting with a user interface of a client processor</u>, a request to edit a first concept in an existing machine-readable network of interrelated concepts {See WICAL, col. 17, lines 5-9, wherein this reads over "a user that manually checks the categorization results of the learning system process brings to bear a broader semantic context"; and lines 26-28, wherein this reads over "allows the user to select a number of terms for which the user desires to manually verify"} wherein a concept comprises a normalized semantic representation and is <u>defined the existing machine-readable network of interrelated concepts by a group of synonyms</u>;

>> representing the first concept {See WICAL, col. 17, lines 26-28,wherein this reads over "the learning system includes a user interface that allows the user to select a number of terms for which the user desires to manually verify"} on a display <u>of the user interface</u> for the user, including displaying a first collection of <u>synonyms</u> that <u>define</u> the first concept and a description of one or more existing relationships between the first concept and other concepts {See BORGIDA, C7:L14-59 and C9:L44-66} in the existing machine-readable network of interrelated concepts {See WICAL '560, Figures 3 and 10A-B};

>> receiving, from the user <u>interacting with the user interface</u>, at least one new relationship between the first concept and a second concept {See WICAL '560, C6:L7-21, wherein this reads over "[t]he search and retrieval system 100 permits a user to subsequently augment the classification and contextual information through content processing of the documents input by the user"};

>> receiving, <u>from the user interacting with the user interface</u>, a relationship type characterizing a type of the at least one new relationship {See WICAL, Figure 3; col. 3, lines 2-29, wherein this reads over "[t]he categories are arranged in a hierarchical structure that includes a plurality of levels"; and col. 4, lines 43-45, wherein this reads over "the parent category . . . includes the child categories"};

>> receiving, <u>from the user interacting with the user interface</u>, a strength value characterizing a strength of the at least on new relationship {See WICAL, col. 10, lines 34-40, wherein this reads over "reflects the strength of the classification of the term for the category"}; <u>and</u>

>> <u>a semantic engine</u> updating the machine-readable network of interrelated concepts to reflect the at least one new relationship, the relationship type, and the strength value; {See WICAL, col. 4, lines 25-28, wherein this reads over "[i]n addition to identifying the proper high level category to learn a term, the learning system determines the proper level of the hierarchy under the high level category to classify the term"; and col. 17, lines 9-10, wherein this reads over "a user may therefore re-categorize one or more phrases"};

representing the updated first concept on the display for the user {See WICAL '560, Figure 3; and C10:L36-62, wherein this reads over "[t]he example presentation shown in FIG. 3 provides a global view of the response to the users query"}.

While WICAL may fail to expressly disclose the use of an user interface to represent term relationships, WICAL '560 discloses the use of an interface to provide a global view of relationships between concepts. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by WICAL with the invention as disclosed by WICAL '560. While WICAL may fail to expressly disclose the method step of adding a primary term, the related term, the relationship between the first concept and the second concept, and the relationship type to a network, BORGIDA discloses an invention wherein new concepts are integrated into a knowledge-based management system of concepts and relations.

One of ordinary skill in the art would have been motivated to do these modifications so that concepts may be added to the network in response to a user request.

23.   **As per dependent claims 13 and 32**, WICAL, in combination with WICAL '560 and BORGIDA, discloses:

The method of claim 12, further comprising receiving a new strength value for one of the existing relationships between the first concept and a third concept {See WICAL, col. 17, lines 48-53, wherein this reads over "classification strengths are generated from the initial bottom to top analysis of the categorization schema. During the subsequent top to bottom analysis, the learning system, for this example categorization schema, eliminates nodes that contain insufficient data (e.g. noise nodes)"}.

24.   **As per dependent claims 14 and 33**, WICAL, in combination with WICAL '560 and BORGIDA, discloses:

The method of claim 12, further comprising receiving a new relationship type for one of the existing relationships between the first concept and a third concept {See WICAL, col. 17, lines 9-10, wherein this reads over "a user may therefore re-categorize one or more phrases"}.

25.   **As per independent claim 41**, WICAL, in combination with WICAL '560 and BORGIDA, discloses a user display as recited in the present claim. {See WICAL ' 560, Figures 9C and 10A-B}.

26.   **As per dependent claims 43 and 45**, WICAL, in combination with WICAL '560 and BORGIDA, discloses that categories may be stored in knowledge catalogs {See WICAL, '515, C9:L38-54}.

27.   **As per dependent claims 44 and 46**, WICAL, in combination with WICAL '560 and BORGIDA,

discloses that knowledge catalogs (i.e. a concept database) may be updated {See WICAL, '515, C19:L48-57}.

Response to Arguments

28.   Applicant's arguments filed 2 September 2008 have been fully considered but they are not

persuasive.

         a.   Rejections under 35 U.S.C. 103

                  As per claims 1 and 20, Applicant asserts the argument that the cited prior art references

fail to "describe or suggest such an addition of a concept to a machine-readable network of

interrelated concepts." See Amendment, page 13. The Examiner respectfully disagrees. It is

noted that Wical '515 discloses that "[t]he content process system 110 may associate one

category for a single word or phrase from a single document, depending upon the use of the

word or phrase in the document." See Wical '515, col. 9, lines 3-8. That is, wherein a single

word or phrase (i.e. a primary term) may be associated with a category (i.e. a concept), Wical

would indeed read upon the present invention as claimed. Furthermore, the Examiner notes that

Wical discloses a system wherein a user may input terms for learning to the learning system such

that the term is categorized "to reflect the general meaning of the term". See Wical, C9:L32-37.

                  Additionally, Applicant asserts the argument that Borgida "neither describes nor suggests

that these concepts are defined by a group of synonyms, can be represented by a primary term,

a first related term, and a second related term." See Amendment, page 14. In response to

applicant's arguments against the references individually, one cannot show nonobviousness by

attacking references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091,

231 USPQ 375 (Fed. Cir. 1986). In this case, Wical discloses a learning system wherein select

terms may be inputted and categorized for subsequent incorporation into a knowledge base

system. Wherein Borgida discloses that data can be obtained using concepts in a knowledge

base system such that terms are classified according to particular concepts, it would have been obvious to one of ordinary skill in the art that the combination of Borgida and Wical would yield a system wherein terms which are classified into a particular concept would define said concept.

Additionally, Applicant asserts the argument that Borgida fails to disclose or suggest "that these subsumption relationships are characterized via a strength value." See Amendment, page 15. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Wical discloses a learning system wherein "a strength for certain nodes reflects the strength of the classification of the term for the category." See Wical, C10:L34-61.

As per claims 12 and 31, Applicant asserts the argument that the cited prior art references fail to disclose "a normalized semantic representation." See Amendment, page 19. The Examiner respectfully disagrees. It is noted that under the broadest reasonable interpretation of "a normalized semantic representation," it would have been obvious to one of ordinary skill in the art that the categories in the knowledge catalog of Wical '515 would indeed read upon the claimed feature.

As per claim 41, applicant asserts the argument that the cited prior art references fail to disclose "lists of two or more terms that represent the concept, parent/child relationships, child/parent relationships, and lateral relationships." See Amendment, page 24. The Examiner respectfully disagrees. It is noted that Wical '515 discloses a catalog of categories wherein semantic/lexical relationships between categories may be in the up/down (i.e. child/parent relationships) or in a left/right direction (i.e. lateral relationships). See Wical, '515, col. 9, lines 38-54. Accordingly, it would have been obvious to one of ordinary skill in the art that Wical '515 would indeed disclose the invention as claimed.

       Accordingly, for the aforementioned reasons above, the claim rejections under 35 U.S.C.

103 are maintained.

Conclusion

29.   Any inquiry concerning this communication or earlier communications from the examiner should

be directed to PAUL KIM whose telephone number is (571)272-2737. The examiner can normally be

reached on M-F, 9am - 5pm.

       If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where

this application or proceeding is assigned is 571-273-8300.

       Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at

866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or

access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paul Kim/

Paul Kim
Examiner, Art Unit 2169

/PK/